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PROCEEDINGS

OF THE

ACADEMY OF NATURAL SCIENCES

OF

PHILADELPHIA.

1881.

JANUARY 4, 1881.

Dr. Jos. LEIDY in the chair.

Twenty persons present.

Rhizopods as Food for Young Fishes.—Prof. LEIDY remarked that last September he had received a letter from Mr. S. A. Forbes, of the Illinois State Laboratory of Natural History, Normal, Illinois, stating that the young of some of the suckers (*Catostomidae*), *Hypentelium*, *Myxostoma*, etc., “have the intestines packed with tests of *Diffugia* and *Arcella*.” Later, Mr. Forbes sent two slides, with some of the intestinal contents, for examination.

The slide with food from the intestine of the large-scaled Mullet, *Myxostoma macrolepidotum*, from Macinaw Creek, contained the following species:

DIFFLUGIA GLOBULOSA. Shell of rather coarse sand, with larger grains around the mouth; mostly in the shape of the segment of an oval, with the oral pole truncated. Most numerous form.

Measurements of a number were as follows:

1.	Shell	0.18	mm. long;	0.162	broad;	oral end,	0.102	broad.
2.	“	0.18	“	“	0.156	“	“	0.102
3.	“	0.156	“	“	0.15	“	“	0.072
4.	“	0.174	“	“	0.156	“	“	0.09
5.	“	0.198	“	“	0.168	“	“	0.096
6.	“	0.198	“	“	0.21	“	“	0.108

DIFFLUGIA ACUMINATA. Shell mostly slightly unsymmetrical; some with a slight neck, straight or slightly everted at the mouth; a few with

two points to the summit; usually of minute sand and comparatively smooth. One oblique form noticed (No. 6), approaching *D. constricta*.

1. Shell 0.18 mm. long; 0.108 broad; oral end 0.06 broad.
2. Shell of same size, but with a short neck, slightly erected and undulant at the border.
3. Shell 0.18 mm. long; 0.114 broad; oral end 0.048 broad.
4. " 0.198 " " 0.102 " " 0.06 "
5. " 0.18 " " 0.114 " " 0.06 "
6. " 0.162 " " 0.09 " " 0.06 "

Nos. 1-3 of fine sand, and smooth; Nos. 4-6 of coarser sand.

The slide with food of *Eremyzon succetta*. The material apparently consisted of the superficial sediment of the water, and contained entomostacans, rotifers, arthroid larvæ, desmids, diatoms, etc., together with the following:

DIFFLUGIA GLOBULOSA. Shell 0.15 mm. long, 0.138 broad; oral end 0.078 broad.

DIFFLUGIA LOBOSTOMA. Shell with trilobed mouth, 0.09 mm. long, 0.078 broad; mouth 0.03 wide. Several measured of the same size; others slightly smaller. The most common species present.

DIFFLUGIA PYRIFORMIS. Shell 0.42 mm. long, 0.21 broad, at mouth 0.09 broad.

ARCELLA VULGARIS. Variety with pitted shell.

ARCELLA DISCOIDES. Shell 0.18 mm. broad, mouth 0.026 wide. Another specimen 0.15 broad, with mouth 0.054 wide.

Another rhizopod shell observed, was different from any previously noticed. The shell had the form of that of *Arcella discoides*, with no trace of the structure characteristic of that of *Arcella*, but composed of a nearly colorless or pale yellowish chitinous substance, incorporated with minute spherical granules of uniform size, darkly outlined, scattered irregularly, isolated, or in little groups or chains, straight or irregular, and in pairs, or up to five in number. The specimens measured about 0.105 mm. broad, with the mouth 0.03 wide. A chain of five granules of the shell measured 0.009 mm. long.

It is certainly an interesting observation of Mr. Forbes, to discover that the young suckers should use the rhizopod shells to obtain as nutriment their little stores of delicate protoplasm.

JANUARY 11.

Dr. JOHN L. LE CONTE in the chair.

Eighteen persons present.

A paper entitled "Descriptions of new species of Terrestrial Mollusca of Cuba," by Rafael Arango, was presented for publication.